enviros®

February 15, 1997

Mr. R. Jeff Granberry
Shell Oil Products Company
P.O. Box 4023
Concord, California 94524

RE: **Quarterly Monitoring Report - Fourth Quarter 1996**
Response to November 20, 1996 ACHCSA Letter
Former Shell Service Station
2101 Park Boulevard
Oakland, California
WIC #204-5508-1206

Dear Mr. Granberry:

This Quarterly Monitoring Report describes the recently completed activities associated with ground water monitoring and sampling at the referenced site (Plates 1 and 2). This report was prepared to meet quarterly reporting guidelines issued by the Regional Water Quality Control Board, San Francisco Bay Region and the Alameda County Health Care Services Agency (ACHCSA). A response to ACHCSA correspondence dated November 20, 1996 is also included in this report.

Quarterly Monitoring & Sampling Summary

Ground water monitoring and sampling for the fourth quarter of 1996 are summarized below:

- Blaine Tech Services Inc. (Blaine Tech) measured ground water levels and collected ground water samples from Wells S-1, S-2, and S-3 on December 10, 1996. The samples were transported to Sequoia Analytical (Sequoia) of Redwood City, California for chemical analysis.

- Ground water level measurement data were evaluated and used to prepare a ground water contour map (Plate 2). Ground water flow direction appears to be southerly at a calculated hydraulic gradient of 0.04.

- The ground water from Well S-3 contained 6,100 ppb TPPH and 470 ppb benzene. Wells S-1 and S-2 contained TPPH concentrations ranging from ND to 78 ppb and benzene concentrations ranging from ND to 1.4 ppb. Well S-1 contained 84 ppb TEPH

Quarterly Sampling

Monitoring Wells S-1, S-2, and S-3 were sampled and analyzed for Total Purgeable Petroleum Hydrocarbons (TPPH) according to EPA Method 8015 (Modified) and benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl-tertiary-butyl-ether (MTBE) according to EPA Method 8020. Monitoring Well S-1 was also analyzed for Total Extractable Petroleum Hydrocarbons (TEPH) according to EPA Method 8015 (Modified). Additionally, an equipment blank and a duplicate sample were prepared and analyzed for quality control purposes.

Field monitoring data and chemical analytical data for TPPH, TEPH and BTEX have been included in Table 1. A ground water contour/benzene concentration map is presented as Plate 2. The Blaine Tech quarterly ground water monitoring report is presented in Appendix A.

Quarterly monitoring, sampling, and reporting will continue on the established schedule for the next quarter.

Response to ACHCSA Letter Dated November 20, 1996

This letter requests that Shell consider some type of remediation for Well S-3 due to persisting concentrations of TPH-G and BTEX. We propose to install Oxygen Release Compound (ORC) in both this well and in Well S-2 to stimulate natural degradation of petroleum hydrocarbons identified in these wells. Measurements of dissolved oxygen will be collected during quarterly monitoring events to monitor the effectiveness of the ORC.

This letter also comments on the possible need for further investigation if southerly ground water flow continues. While ground water flow is to the south again this quarter, the southernmost well (S-2) has historically contained only low level concentrations of petroleum hydrocarbons. We do not believe further investigation is warranted at this time.

Installation of ORC will proceed upon approval from ACHCSA.

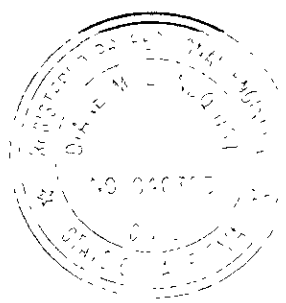
If you have any questions regarding the contents of this document, please call.

Sincerely,

Enviros, Inc.

Jeffrey L. Peterson
Hydrogeologist

Diane M Lundquist, P.E.
Senior Engineer
C46725



Attachments

Table 1. Well Concentrations

Plate 1. Vicinity Map
Plate 2. Ground Water Contour/Benzene Concentration Map

Appendix A

Blaine Tech Services Inc. - Quarterly Ground Water Monitoring Report

cc: Mr. Barney Chan, Alameda County Health Care Services Agency
Mr. Frank J. Schlessinger, Schlessinger & Associates
Mr. Steve Makara, Goodyear Tire & Rubber Company

TABLE 1

WELL CONCENTRATIONS
Shell Oil Products Company
2101 Park Boulevard
Oakland, California
WIC #204-5508-1206

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	O & G by 5520 B (ug/L)	O & G by 5520 B/F (ug/L)	Comments
S-1	**Top casing elevation (ft):**			**11.93**									
20-Jun-95	4 67	7.26	0.00	160	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	
12-Sep-95	4 19	7.74	0.00	<50	250	3.0	<0.5	<0.5	<0.5	NA	<5000	<5000	
28-Dec-95	5.30	6.63	0.00	70	160	1.1	<0.5	<0.5	1.3	NA	<5000	<5000	
25-Mar-96	3 44	8.49	0.00	70	220	<0.5	<0.5	<0.5	<0.5	<2.0	NA	NA	
27-Jun-96	3 15	8.78	0.00	<50	140	0.59	<0.50	<0.50	<0.50	<2.5	NA	NA	
26-Sep-96	3.90	8.03	0.00	<50	190	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	
10-Dec-96	2.46	9.47	0.00	<50	84	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	
S-2	**Top casing elevation (ft):**			**12.06**									
20-Jun-95	5 80	6.26	0.00	180	NA	1.1	<0.5	<0.5	0.6	NA	NA	NA	
12-Sep-95	5 78	6.28	0.00	190	NA	18	<0.5	1.2	0.6	NA	NA	NA	
28-Dec-95	4.02	8.04	0.00	200	NA	11	1.0	1.0	4.0	NA	NA	NA	
25-Mar-96	5.56	6.50	0.00	180	NA	12	0.8	1.4	1.0	<2.0	NA	NA	
27-Jun-96	6 00	6.06	0.00	150	NA	7.7	0.79	0.93	0.5	<2.5	NA	NA	
26-Sep-96	5.73	6.33	0.00	83	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	
10-Dec-96	4.57	7.49	0.00	78	NA	1.4	<0.50	0.57	<0.50	<2.5	NA	NA	
S-3	**Top casing elevation (ft):**			**13.54**									
20-Jun-95	4.90	8.64	0.00	5500	NA	240	34	120	840	NA	NA	NA	
12-Sep-95	5.37	8 17	0.00	5200	NA	690	14	290	280	NA	NA	NA	
28-Dec-95	3 90	9.64	0.00	13000	NA	670	34	960	1400	NA	NA	NA	
25-Mar-96	4.30	9.24	0.00	7300	NA	560	65	540	820	<200	NA	NA	
27-Jun-96	5.00	8.54	0.00	17000	NA	1100	83	1200	2700	<250	NA	NA	

TABLE 1

WELL CONCENTRATIONS
Shell Oil Products Company
2101 Park Boulevard
Oakland, California
WIC #204-5508-1206

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	O & G by 5520 B (ug/L)	O & G by 5520 B/F (ug/L)	Comments
26-Sep-96	5.23	8.31	0.00	8900	NA	920	43	400	1100	<125	NA	NA	
10-Dec-96	3.88	9.66	0.00	6100	NA	470	25	290	640	<100	NA	NA	
S-3 (DUP)													
20-Jun-95	NA	NA	NA	6300	NA	270	37	120	1100	NA	NA	NA	
12-Sep-95	NA	NA	NA	4700	NA	620	13	260	240	NA	NA	NA	
28-Dec-95	NA	NA	NA	13000	NA	800	34	1000	1600	NA	NA	NA	
25-Mar-96	NA	NA	NA	7400	NA	580	19	620	670	<20	NA	NA	
27-Jun-96	NA	NA	NA	1903	NA	13	1.0	14	34	7.2	NA	NA	
26-Sep-96	NA	NA	NA	9800	NA	960	41	450	1300	120	NA	NA	MTBE by 8260: <16ppb (a)
10-Dec-96	NA	NA	NA	7700	NA	550	33	380	880	120	NA	NA	

Abbreviations:
NA = Not analyzed or not available
TPPH = Total Purgeable Petroleum Hydrocarbons carbon range C6 to C12 by EPA Method 8015 (Modified)
(previously reported as Total Petroleum Hydrocarbons as Gasoline)
TPH-D = Total Extractable Petroleum Hydrocarbons carbon range C9 to C24 by EPA Method 8015 (Modified)
(previously reported as Total Petroleum Hydrocarbons as Diesel)
O&G = Oil and Grease
BTEX = benzene, toluene, ethylbenzene, xylene by EPA Method 8020
MTBE = methyl-tertiary-butyl ether by EPA Method 8020
<x = Not detected at detection limit of x
(DUP) = Duplicate sample

Note
(a) = The MTBE was analyzed by EPA method 8260 one day past hold time. The MTBE value did not confirm therefore, all MTBE results at this site should be considered estimated.
All wells surveyed to Mean Sea Level

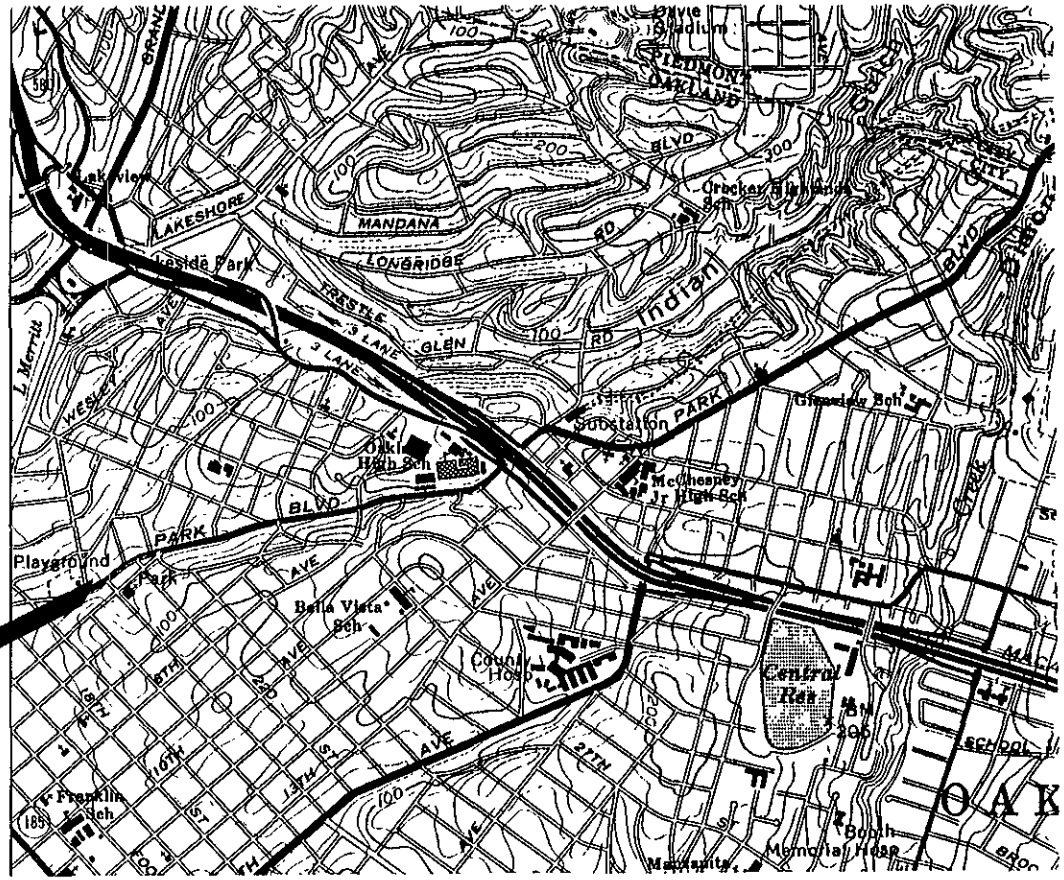


PLATE
1

VICINITY MAP
Former Shell Service Station
2101 Park Boulevard
Oakland, California

enviros®
E4/95267.01

Drawn By: GLV

Date: 2-24-95

Approved By: JPP

Date: 2/4/97

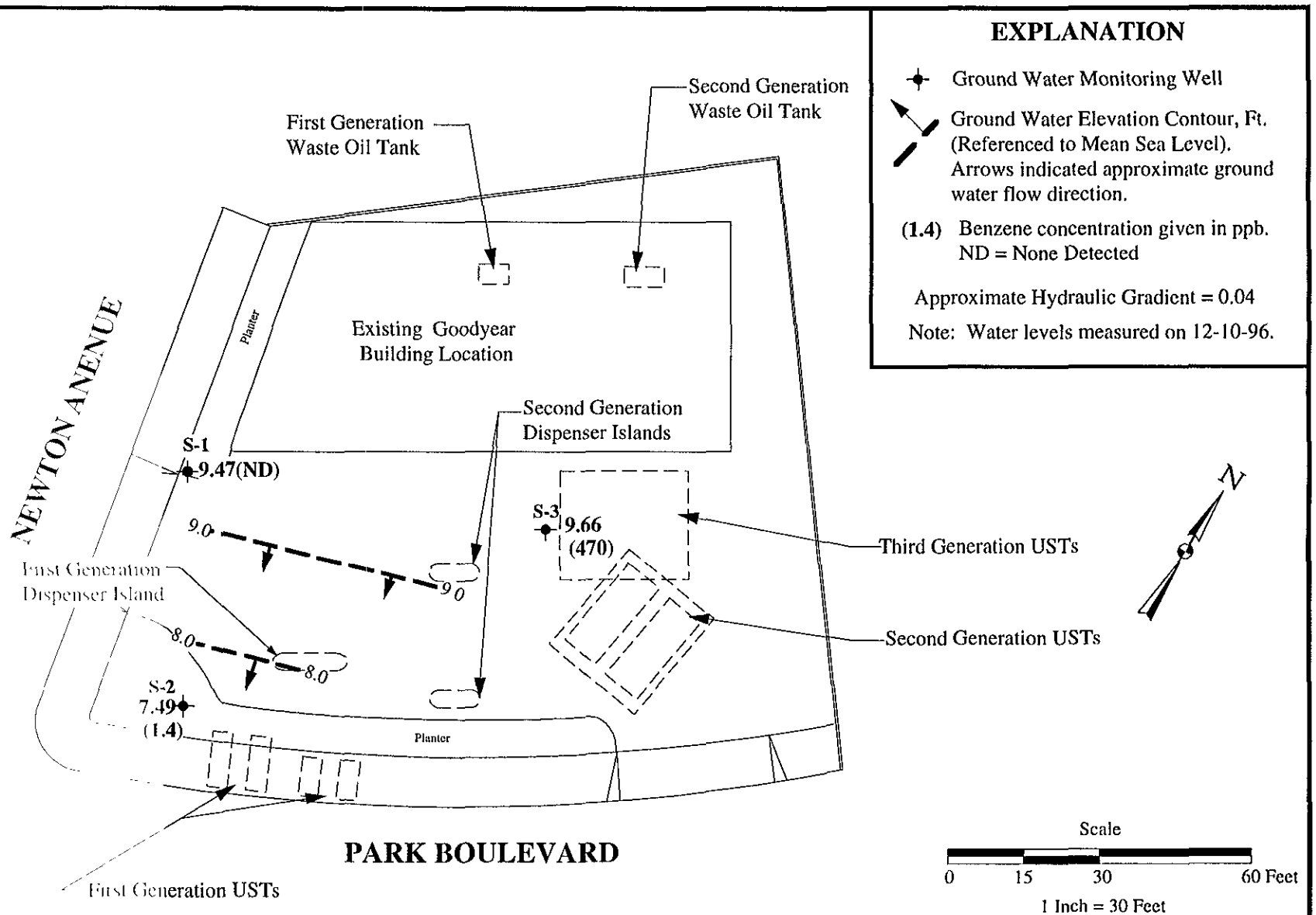


PLATE
2

GROUND WATER CONTOUR/BENZENE CONCENTRATION MAP
Former Shell Service Station
2101 Park Boulevard
Oakland, California

enviros®
97267

Drawn By: ILP | Date: 2-3-97 | Approved By: JAP | Date: 2-10/97

Appendix A

BLAINE TECH SERVICES INC.
Quarterly Ground Water Monitoring Report

BLAINE
TECH SERVICES INC.

985 TIMOTHY DRIVE
SAN JOSE, CA 95133
(408) 995-5535
FAX (408) 293-8773

January 3, 1996

Shell Oil Company
P.O. Box 4023
Concord, CA 94524

Attn: R. Jeff Granberry

Shell WIC #204-5508-1206
2101 Park Blvd.
Oakland, California

4th Quarter 1996

Quarterly Groundwater Monitoring Report 961210-S-2

Blaine Tech Services, Inc. performs environmental sampling and documentation as an independent third party. Copies of our Sampling Report along with the laboratory's Certified Analytical Report are forwarded to the consultant overseeing work at this site. Submission of the assembled documents to interested regulatory agencies will be made by the designated consultant.

Groundwater monitoring at this site was performed in accordance with Standard Operating Procedures provided to the interested regulatory agencies. If you have any questions about the work performed at this site please call me at (408) 995-5535 ext. 201.

Yours truly,

Francis Thie

attachments: Table of Well Gauging Data
Chain of Custody
Field Data Sheets
Certified Analytical Report

cc Enviros, Inc
P O Box 259
Sonoma, CA 95476-0259
Attn Joe Neely

(Any professional evaluations or recommendations will be made by the consultant under separate cover)

TABLE OF WELL GAUGING DATA

WELL I.D.	DATA COLLECTION DATE	MEASUREMENT REFERENCED TO	QUALITATIVE OBSERVATIONS (sheen)	DEPTH TO FIRST IMMISCIBLES LIQUID (FPZ) (feet)	THICKNESS OF IMMISCIBLES LIQUID ZONE (feet)	VOLUME OF IMMISCIBLES REMOVED (ml)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
S-1	12/10/96	TOC	--	NONE	--	--	2.46	16.90
S-2	12/10/96	TOC	--	NONE	--	--	4.57	17.35
S-3 *	12/10/96	TOC	ODOR	NONE	--	--	3.88	16.88

* Sample DUP was a duplicate sample taken from well S-3.

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 961210-52

Date:
Page 1 of 1

Site Address: 2101 Park Blvd., Oakland, CA

WIC#: 204-5508-1206

Shell Engineer: R. Jeff Granberry — Phone No.: (510) 675-6168 Fax #: 675-6172

Consultant Name & Address: Blaine Tech Services, Inc. 985 Timothy Dr., San Jose, CA

Consultant Contact: Fran Thie — Phone No.: (408) 995-5535, x201 Fax #: 293-8773

Comments:

Sampled by: [signature]

Printed Name: DOUG SANDERS

LAB: SEQUOIA

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
G.W. Monitoring	XX 4441	24 hours ☐
Site Investigation	☐ 4441	48 hours ☐
Soil Classify/Disposal	☐ 4442	15 days XX (Normal)
Water Classify/Disposal	☐ 4443	Other ☐
Soil/Air Rem. or Sys. O & M	☐ 4452	NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.
Water Rem. or Sys. O & M	☐ 4453	
Other	☐	

UST 'AGENCY':

Analysis Required

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	MTBE		Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-1	12/10/96			X		5		X				X	X	1	A-E					
S-2	12/10/96			X		3						X	X	2	A-C				9612796	
S-3	12/10/96			X		3						X	X	3	(					
DUP	12/10/96			X		3						X	X	4						
EB	12/10/96			X		3						X	X	5	D					

Relinquished By (signature): [signature]	Printed Name: DOUG SANDERS	Date: 12/11/96 Time: 10:45	Received (signature): [signature]	Printed Name: Fulcher	Date: 12/11/96 Time: 10:45
Relinquished By (signature): [signature]	Printed Name:	Date: 12/11/96 Time:	Received (signature):	Printed Name:	Date: Time:
Relinquished By (signature):	Printed Name:	Date: Time:	Received (signature): [signature]	Printed Name: P. LE	Date: 12-11-96 Time: 1240

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS

Shell Oil Co. Chain of Custody

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services
985 Timothy Drive
San Jose, CA 95133
Attention: Jim Keller

Project: Shell Oakland/961210-S2

Enclosed are the results from samples received at Sequoia Analytical on December 11, 1996. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9612796 -01	LIQUID, S-1	12/10/96	TPGBMW Purgeable TPH/BTEX
9612796 -01	LIQUID, S-1	12/10/96	TPHD_W Extractable TPH
9612796 -02	LIQUID, S-2	12/10/96	TPGBMW Purgeable TPH/BTEX
9612796 -03	LIQUID, S-3	12/10/96	TPGBMW Purgeable TPH/BTEX
9612796 -04	LIQUID, DUP	12/10/96	TPGBMW Purgeable TPH/BTEX
9612796 -05	LIQUID, EB	12/10/96	TPGBMW Purgeable TPH/BTEX

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project

Very truly yours,

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Shell Oakland/961210-S2	Sampled: 12/10/96
985 Timothy Drive	Sample Descript: S-1	Received: 12/11/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 12/16/96
Attention: Jim Keller	Lab Number: 9612796-01	Reported: 12/22/96

QC Batch Number: GC121696BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	86

Analytes reported as N.D. were not present above the stated limit of detection

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Shell Oakland/961210-S2	Sampled: 12/10/96
985 Timothy Drive	Sample Descript: S-1	Received: 12/11/96
San Jose, CA 95133	Matrix: LIQUID	Extracted: 12/14/96
	Analysis Method: EPA 8015 Mod	Analyzed: 12/16/96
Attention: Jim Keller	Lab Number: 9612796-01	Reported: 12/22/96

QC Batch Number: GC1214960HBPEXA
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	**50**	**84**
Chromatogram Pattern:		**C9-C24**

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	137

Analytes reported as N D were not present above the stated limit of detection

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Shell Oakland/961210-S2	Sampled: 12/10/96
985 Timothy Drive	Sample Descript: S-2	Received: 12/11/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 12/16/96
Attention: Jim Keller	Lab Number: 9612796-02	Reported: 12/22/96

QC Batch Number: GC121696BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**78**
Methyl t-Butyl Ether	2.5	N.D.
Benzene	**0.50**	**1.4**
Toluene	0.50	N.D.
Ethyl Benzene	**0.50**	**0.57**
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	108

Analytes reported as N.D. were not present above the stated limit of detection

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Renner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Shell Oakland/961210-S2	Sampled: 12/10/96
985 Timothy Drive	Sample Descript: S-3	Received: 12/11/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 12/16/96
Attention: Jim Keller	Lab Number: 9612796-03	Reported: 12/22/96

QC Batch Number: GC121696BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**2000**	**6100**
Methyl t-Butyl Ether	100	N.D.
Benzene	**20**	**470**
Toluene	**20**	**25**
Ethyl Benzene	**20**	**290**
Xylenes (Total)	**20**	**640**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	105

Analytes reported as N.D. were not present above the stated limit of detection

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Shell Oakland/961210-S2	Sampled: 12/10/96
985 Timothy Drive	Sample Descript: DUP	Received: 12/11/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 12/16/96
Attention: Jim Keller	Lab Number: 9612796-04	Reported: 12/22/96

QC Batch Number: GC121696BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**2000**	**7700**
Methyl t-Butyl Ether	**100**	**120**
Benzene	**20**	**550**
Toluene	**20**	**33**
Ethyl Benzene	**20**	**380**
Xylenes (Total)	**20**	**880**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	108

Analytes reported as N D were not present above the stated limit of detection

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Shell Oakland/961210-S2	Sampled: 12/10/96
985 Timothy Drive	Sample Descript: EB	Received: 12/11/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 12/16/96
Attention: Jim Keller	Lab Number: 9612796-05	Reported: 12/22/96

QC Batch Number: GC121696BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	86

Analytes reported as N.D. were not present above the stated limit of detection

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Shell Oakland/961210-S2	Received: 12/11/96
985 Timothy Drive San Jose, CA 95133	Lab Proj. ID: 9612796	Reported: 12/22/96
Attention: Jim Keller		

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of \ \ pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Peggy Renner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services, Inc.
985 Timothy Drive
San Jose, CA 95133
Attention: Jim Keller

Client Project ID: Shell Oakland/961210-S2
Matrix: Liquid
Work Order #: 9612796 -01-05

Reported: Dec 30, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC121696BTEX06A	GC121696BTEX06A	GC121696BTEX06A	GC121696BTEX06A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	A. Porter	A. Porter	A. Porter	A. Porter
MS/MSD #:	961275103	961275103	961275103	961275103
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/16/96	12/16/96	12/16/96	12/16/96
Analyzed Date:	12/16/96	12/16/96	12/16/96	12/16/96
Instrument I.D.#:	GCHP06	GCHP06	GCHP06	GCHP06
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	11	11	10	31
MS % Recovery:	110	110	100	103
Dup. Result:	11	10	10	31
MSD % Recov.:	110	100	100	103
RPD:	0.0	9.5	0.0	0.0
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK121696	BLK121696	BLK121696	BLK121696
Prepared Date:	12/16/96	12/16/96	12/16/96	12/16/96
Analyzed Date:	12/16/96	12/16/96	12/16/96	12/16/96
Instrument I.D.#:	GCHP06	GCHP06	GCHP06	GCHP06
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	9.8	9.8	9.5	28
LCS % Recov.:	98	98	95	93
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Please Note.
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference